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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/843,651	03/15/2013	Richard Barber Ainsworth III	ADS-001	5906

45588 7590 07/19/2017  
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EXAMINER
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DESAI, RESHA

ART UNIT	PAPER NUMBER
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3625

NOTIFICATION DATE	DELIVERY MODE
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07/19/2017

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* RICHARD BARBER AINSWORTH III, CHRISTINE HARDIN,  
THOM-AUSTIN YOUNG, DANIEL PAUL FINKELMAN, and  
DEAN LAWRENCE KOWALSKI

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Appeal 2016-007513  
Application 13/843,651<sup>1</sup>  
Technology Center 3600

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Before MAHSHID D. SAADAT, THU A. DANG, and  
CARL L. SILVERMAN, *Administrative Patent Judges*.

SILVERMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–10, 14–35, 47–61, and 65–74, which constitute the only claims pending. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

STATEMENT OF THE CASE

The invention relates to recommending items in the context of a

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<sup>1</sup> The real party in interest is identified as Comenity LLC. App. Br. 1.

specific collection built for a customer's specific preferences and employing customer input that pertains to previously purchased items and future preferences. Abstract. Claim 1, reproduced below, is exemplary of the subject matter on appeal (disputed limitations emphasized):

1. A method for enhancing a retailer's revenue by making a recommendation to a customer, the method comprising:

receiving, by a computer system, input that pertains to a customer, wherein at least a portion of the input is received from a customer specified social media in response to the computer system logging into the customer specified social media using social media settings provided by the customer;

*receiving, by the computer system, rules pertaining to valid or invalid combinations of items;*

*analyzing, by the computer system, the input that pertains to the customer to build a correlation table based on the received input; and*

dynamically generating, by the computer system based on the input, the correlation table, and the rules, a recommendation for the customer that includes a collection of coordinated items that provides a personalized ensemble that is personalized for the customer.

App. Br. 25 (Claims App'x).

## THE REJECTIONS

Claims 1–10, 14–35, 47–61, and 65–74 stand rejected under 35 U.S.C. § 101 as being directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. Final Act. 3–4.

Claims 1, 17, 20, 21, 24, 26, 29, 47, 48, 51, 52, and 68 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Linh et al. (US 2014/0089135 A1; pub. March 27, 2014) (“Linh”) in view of Saul et al. (US 2009/0037295 A1; pub. February 5, 2009) (“Saul”). Final Act. 4–11.

Claims 2–10, 14–16, 19, 22, 23, 27, 28, 30, 32, 33, 35, 49, 50, 53–61, 65–67, 70, and 71 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Linh, Saul, and McGovern et al. (US 2014/0067596 A1; pub. March 6, 2014) (“McGovern”). Final Act. 12–27.

Claims 18 and 69 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Linh, Saul, and Cheng et al. (US 2009/0094260 A1; pub. April 9, 2009) (“Cheng”). Final Act. 28–29.

Claims 25 and 34 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Linh, Saul, and Jessup et al. (US 2013/0268377 A1; pub. October 10, 2013) (“Jessup”). Final Act. 30–31.

Claim 31 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Linh, Saul, and Heidel (US 2010/0228646 A1; pub. September 9, 2010). Final Act. 32–33.

Claims 72–74 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Linh, Saul, and Song et al. (US 2010/0100455 A1; pub. April 22, 2010). Final Act. 34–36.

## ANALYSIS

### *The §101 rejection*

The Examiner concludes:

[t]he claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. Claims 1–10, 14–35, 47–61, and 65–74 are directed to the abstract idea of recommending gifts, which is considered to be a method of organizing human activity. The concept of "recommending gifts" is described by the generating step in claim 1.

The claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the computer as recited is a generic computer component that performs functions (*ie.*, receiving input from a customer, receiving rules, analyzing the input and generating a recommendation for the customer). These are generic computer functions (*i.e.*, receiving data, receiving data, analyzing data and generating data) that are well-understood, routine and conventional activities previously known to the industry. The claims also recite a computer system, which does not add meaningful limitations to the idea of recommending gifts beyond generally linking the system to a particular technological environment, that is, implementation via computers. The claims do not amount to significantly more than the underlying abstract idea of recommending gifts. Accordingly, claims 1–10, 14–35, 47–61 and 65–74 are ineligible.

Final Act. 3.

Appellants contend the Examiner’s rationale and conclusion that the claims are directed to a judicial exception and not patent eligible constitutes error. App. Br. 8–14; Reply Br. 2–4. Appellants then present six specific arguments. *Id.*

Appellants argue (1) there is no organizing human activity in the claim because

while it might be an abstract idea to just take human generated recommendations and somehow transmit them from one human to another over a computer system, that is not what is being claimed; [w]ith respect to Claim 1, for example, a computer system receives input about the customer, analyzes the input, and then generates a recommendation.

App. Br. 9–10.

We are not persuaded by Appellants' argument and agree, instead, with the Examiner that the claim "is considered a certain method of organizing human activity" and "[t]his abstract idea describes concepts relating to interpersonal and intrapersonal activities, such as managing relationships between people, social activities, and human behavior." Ans. 4. We also agree "[s]everal cases have found concepts relating to managing relationships between people to be abstract ideas, such as creating a contractual relationship . . . and processing loan information." *Id.* (citing *buySAFE, Inc. v. Google, Inc.* 765 F.3d 1350 (Fed. Cir. 2014); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, (Fed. Cir. 2012)). Moreover, we agree the claim can be performed in the human mind, or by a human using a pen and paper because it is the organization and comparison of data and is similar to other concepts that have been identified as abstract by the courts, such as using categories to organize, store and transmit information or comparing new and stored information using rules to identify options. *Id.* (citing *Cyberfone Systems, LLC v. CNN Interactive Group, Inc.* 558 Fed. Appx. 988 (Fed. Cir. 2014); *SmartGene, Inc. v. Advanced Biological Laboratories*, 555 Fed. Appx. 950 (Fed. Cir. 2014)).

Appellants argue (2) the claims require more than a generic computer and the claims have been amended to include specific activities that are performed by the recited computer systems e.g., "building a correlation table based on the received input, and to recite dynamically generating a recommendation, based on the input, the correlation table, and the rules regarding valid and invalid combinations of items." App. Br. 10. We are not persuaded and agree, instead, with the Examiner's conclusion that the claim recites insignificant extrasolution activity that "links the judicial

exception to a particular technological environment or field of use, which has been found by the courts to be well-understood, routine and conventional.” Ans. 5 (citing *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. \_\_\_, 134 S. Ct. 2347, 2356(2014); *Ulramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716-17 (Fed. Cir. 2014)).

Appellants argue (3) the claims do more than “merely implement an abstract idea on a computer” and, instead, improve the technical field by “dynamically generating recommendations for customers which would not otherwise be made or generated.” App. Br. 10. Moreover, Appellants argue a prima facie case has not been made because no objective evidence is set forth to support “[a]bstractness.” *Id.* at 11 (citing *Alice*).

We are not persuaded by Appellants’ argument as the claim is addressed to a business problem of making item recommendations and this problem “addresses a **business** challenge, not a **technological** challenge.” Ans. 6. While “[t]he claimed invention may have solved business problems associated with item recommendations . . . they are not claimed solutions necessarily rooted in computer technology” and “[t]herefore, there is no improvement to the technical field of computer-implemented recommendation engines.” *Id.* at 5–6 (citing Spec. ¶ 1; *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014)).

Appellants’ argument regarding a prima facie case is not relevant to whether the Examiner has given Appellants reasonable notice as to the basis of the § 101 rejection. The notice requirement is set forth by 35 U.S.C. § 132 and is sufficient here.

[T]he PTO carries its procedural burden of establishing a prima facie case when its rejection satisfies 35 U.S.C. § 132, in

“notify[ing] the applicant ... [by] stating the reasons for [its] rejection, or objection or requirement, together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application.” 35 U.S.C. § 132. That section “is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection.” *Chester v. Miller*, 906 F.2d 1574, 1578 (Fed.Cir.1990).

*In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011).

Appellants argue (4) the claims recite more than just the acts of “receiving data, receiving data, analyzing data and generating data” and a human is not able to perform the features of claim 1 without a computer. *Id.* at 12. According to Appellants, “features of claim 1 necessarily require a computer system functioning to dynamically perform complex manipulations of data to achieve a personalized recommendation for a customer.” *Id.* (citing Spec. ¶ 116). Appellants further argue the claim includes a computer system receiving a complex quantity of input which is used to build correlation tables to dynamically and quickly generate recommendations to the customer, and, therefore, does not fall into the category in which a computer performs an activity that is already performed by a human. *Id.* at 12–13.

Appellants argue (5) “Appellants’ [claimed] features definitively demonstrate a method that is clearly more complicated than a basic method of operation to be performed by a human and the complexity of which prevents the method from being performed by a human.” *Id.* at 13. According to Appellants, this is consistent with *Mayo/Alice* which “describes the prevention of the patenting of concepts that are methods of



organizing human activity in that *Mayo/Alice* prevents the patenting of concepts that clearly should remain in the public domain as concepts that are in themselves the basic functioning of a human's existence and/or mode of operation.” *Id.* at 13.

Appellants argue (6) the Examiner’s approach is too simplistic and relies on the preamble statement to reach a conclusory statement that claim 1 involves recommending gifts and therefore a method of organizing human activity, an abstract idea. *Id.* at 13–14. Appellants also continue to argue the features of claim 1 cannot be performed without the application of the process to a computer system. *Id.* at 14.

We are not persuaded by Appellants’ arguments (4), (5), and (6) and agree, instead, with the Examiner’s conclusions. Ans. 6–10. In particular, the Specification describes the invention as “an efficient, cost-effective, and near real-time alternative to what would otherwise be performed by a live personal shopper.” *Id.* at 8 (citing Spec. ¶ 150). Moreover, “the additional elements of a computing system and social media, which do[] not render the invention to be significantly more than the abstract idea because they are well-understood, routine, and conventional elements.” *Id.* at 10.

Appellants additionally argue recent cases support patent eligibility because some improvements in computer related technology are not necessarily abstract and “an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” Reply Br. 2–4 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016); *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016)). According to Appellants, the claims

do more than recite the abstract idea of recommendations to a customer, constitute a technology based solution, and do not preempt the use of an abstract idea.

We conclude each of Appellants' claims on appeal is distinguishable from the type of claim considered by the court in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016) and *Bascom*. We conclude none of Appellants' claims is "directed to an improvement in the functioning of a computer," as was found by the court regarding the subject claim in *Enfish*, 822 F.3d at 1338. To the extent that the recited steps or acts may be performed faster or more efficiently using a computer, our reviewing court provides applicable guidance:

While the claimed system and method certainly purport to accelerate the process of analyzing audit log data, *the speed increase comes from the capabilities of a general-purpose computer, rather than the patented method itself*. See *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) ("[T]he fact that the required calculations could be performed *more efficiently* via a computer does not materially alter the patent eligibility of the claimed subject matter.").

*FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) (emphasis added). See also *Electric Power Grp.*, 830 F.3d at 1350, to the extent that Appellants' claims similarly collect information, analyze it in some fashion, and present or communicate the result. The Court in *Electric Power* guides: "we have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category." 830 F.3d at 1354 (internal citations omitted).

Applying this reasoning to Appellants' claims on appeal, we similarly find any purported faster or more efficient performance of the claimed steps or acts merely comes from the capabilities of a general-purpose computer and/or computer related elements, rather than from Appellants' claimed steps or functions.

In summary, we are not persuaded by Appellants' arguments. The Supreme Court in *Alice Corp. v. CLS Bank International*, 134 S. Ct. 2347 (2014) reiterated the framework set out in *Mayo Collaborative Services v. Prometheus Laboratories Inc.*, 132 S. Ct. 1289 (2012) for "distinguishing patents that claim . . . abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 134 S. Ct. at 2355. The first step in the analysis is to determine if the claim is directed toward a patent-ineligible concept and, if so, the second step is to determine whether there are additional elements that transform the nature of the claim into a patent eligible application. *Alice*, 134 S. Ct. at 2355 (citing *Mayo*, 132 S. Ct. at 1297–98). The second step searches for an inventive concept that is sufficient to ensure that the patent amounts to significantly more than a patent on the patent-ineligible concept. *Alice*, 134 S. Ct. at 2355 (citing *Mayo*, 132 S. Ct. at 1294).

Applying the first step, we agree with the Examiner that the claim is directed to the identified abstract ideas. In addition, we agree the Examiner has considered the abstract ideas in the aggregate. Accordingly, we find that the claim is directed to a patent-ineligible concept.

Having determined that the claim is directed to a patent-ineligible concept, step 2 of the analysis considers whether the claim contains an inventive concept such as additional limitations that narrow, confine or

otherwise tie down the claim so that it does not fully cover the abstract idea itself. *See Alice*, 134 S. Ct. at 2357. Here, we agree with the Examiner that no inventive concept is present. Moreover, the hardware features are the type of generic element that has been determined to be insufficient by the Supreme Court to transform a patent-ineligible claim into one that is patent-eligible. *See Alice*, 134 S. Ct. at 2358. The claim includes no limitations that prevent it from covering the abstract idea itself. Therefore, we are unpersuaded by Appellants' argument that the claims constitute an inventive concept that is significantly more than a patent on the patent-ineligible concept.

In view of the above, we sustain the rejection of claim 1, and independent claims 20, 47, and 52, which recite similar limitations as claim 1 and are argued together with claim 1. We also sustain the rejection of dependent claims 2–10, 14–19, 21–35, 48–51, 53–61, and 65–74 as these claims are not argued separately.

*The §103(a) rejections*

Regarding the rejection of claim 1 over Linh and Saul, Appellants argue neither reference teaches the claim 1 limitations:

*receiving, by the computer system, rules pertaining to valid or invalid combinations of items; and  
analyzing, by the computer system, the input that pertains to the customer to build a correlation table based on the received input.*

App. Br. 15–16.

According to Appellants, Linh is silent as to a correlation table or rules pertaining to valid or invalid combinations of items in the correlation

table. *Id.* at 16. In particular, “Linh compares a user's stated preference with product descriptions and finds the best match” and Linh's focus is on finding matches between a user's preference and a data store of products. *Id.* (citing Linh ¶ 42). Appellants contend Linh does not teach “data store of rules pertaining to a valid or invalid combination of items, such as that which appears in a generated correlation table.” *Id.* Appellants further contend “Saul also is silent with respect to a correlation table and rules therefore.” *Id.* Appellants then argue, since neither reference teaches the disputed limitations, the combination does not teach the disputed limitations. *Id.*

The Examiner finds the combination of Linh and Saul teaches the limitations of claim 1, and, in particular, relies on the teaching of Saul for the disputed limitations. Final Act. 4–6; Ans. 10– 14. The Examiner finds Saul teaches a computer system that generates an outfit match set. Ans. 13. In particular, the Examiner finds:

A receiver receives an item choice including a fashion item. "Communicatively coupled to the receiver is a matching engine to execute an algorithm to match the fashion item with an additional fashion item selected from a style matrix, the matching based upon an attribute." (Paragraph 32) Communicatively coupled to the transmitter is a selection engine to select the fashion item from a digital closet. The selection engine is a processor that processes the fashion item to build an attribute association matrix. Furthermore, a comparison engine is coupled to the processor to compare the attribute association matrix and the style matrix to determine a match of the fashion item and the additional item. (Paragraph 32) Saul further teaches a filter which is coupled to the comparison engine. The filter filters the fashion item and the additional fashion item using a filter that includes at least of a color-to color association filter, a price-to price association filter, or a fabric-to-fabric association filter. The filter may be used of filter attributes of fashion items. (Paragraph 33).

Such computer system that generates an outfit match set; receiver receives an item choice including a fashion item; a matching engine to execute an algorithm to match the fashion item with an additional fashion item selected from a style matrix, the matching based upon attribute; selection engine to select the fashion item from a digital closet, *where the selection engine is a processor that processes the fashion item to build an attribute association matrix; filter filters the fashion item and the additional fashion item are considered "receiving, by the computer system, rules pertaining to valid or invalid combination of items".*

Such generating an outfit match set; receiver receives an item choice including a fashion item; matching engine to execute an algorithm *to match the fashion item with an additional fashion item selected from a style matrix*, the matching based upon an attribute a selection engine to select the fashion item from a digital closet, where the selection engine is a processor that processes the fashion item to build an attribute association matrix; *and comparison engine to compare the attribute association matrix and the style matrix to determine a match of the fashion item and the additional item are considered "analyzing, by the computer, the input that pertains to the customer to build a correlation table based on the received input".*

Ans. 13–14 (emphasis added).

We are not persuaded by Appellants' arguments and agree, instead, with the Examiner's findings. Appellants do not present sufficient persuasive arguments that the claim terms should be limited to exclude the teachings of Linh and Saul and present no persuasive argument that the Examiner's findings and claim interpretations are unreasonable or overbroad. Claim terms in a patent application are given the broadest reasonable interpretation consistent with the specification, as understood by

one of ordinary skill in the art. *In re Crish*, 393 F.3d 1253, 1256 (Fed. Cir. 2004).

We agree the *combination* of the teachings of Linh and Saul teaches the claim 1 limitations while Appellants argue Linh individually and present only conclusory arguments regarding the teaching of Saul. *In re Keller*, 642 F.2d 413, 426 (CCPA 1981) (“[O]ne cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references.” (Citations omitted)); *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

As stated by the Supreme Court, the Examiner’s obviousness rejection must be based on:

“[S]ome articulated reasoning with some rational underpinning to support the legal conclusion of obviousness” . . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.

*KSR Int’l. Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

The Examiner’s findings are reasonable because the skilled artisan would “be able to fit the teachings of multiple patents together like pieces of a puzzle” since the skilled artisan is “a person of ordinary creativity, not an automaton.” *KSR*, 550 U.S. at 420–21.

On this record, Appellants do not present sufficient or persuasive evidence that the combination of the cited references was “uniquely challenging or difficult for one of ordinary skill in the art” or “represented an unobvious step over the prior art.” *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR*, 550 U.S. at 419–21).

Nor have Appellants provided objective evidence of secondary considerations, which our reviewing court guides “operates as a beneficial check on hindsight.” *Cheese Sys., Inc. v. Tetra Pak Cheese & Powder Sys., Inc.*, 725 F.3d 1341, 1352 (Fed. Cir. 2013).

In view of the foregoing, we sustain the rejection of claim 1, and independent claims 20, 47, and 52, which are commensurate in scope with claim 1 and argued together with claim 1. We also sustain the rejection of dependent claims 2, 17, 21, 24, 29, 48, 51, and 68 as these claims are not argued separately. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Claims 18, 25, 31, 34, 69, and 72–74 stand rejected over Linh and Saul in combination with additional cited references. Appellants rely on the same arguments discussed, *supra*, regarding the combination of Linh and Saul and argue the additional references do not cure the deficiency. App. Br. 14–17. As we find no deficiency regarding the teaching of the combination of Linh and Saul, we also sustain the rejection of these claims.

#### DECISION

We affirm the Examiner’s decision rejecting claims 1–10, 14–35, 47–61, and 65–74 under 35 U.S.C. § 101.

We affirm the Examiner’s decision rejecting claims under 35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED